IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the Application:

LISTING OF CLAIMS:

1-52. (Cancelled)

53. (Previously presented) A method for handling a request for a network address allocation, the method comprising:

retrieving a host identifier from the request;

matching said host identifier with a list of host identifiers;

maintaining a state of authentication for a host associated with said host identifier if a match is found;

inserting a proxy address in a relay agent address field in the request;

transmitting said request to an address allocation device to issue or renew a host address if said host associated with said host identifier is in a state of authentication;

receiving a response from said address allocation device;

modifying a value in a server identifier field in said response to match said proxy address; and

transmitting said response to said host associated with said host identifier.

54. (Previously Presented) The method of claim 53, wherein said host identifier is a MAC address.

55. (Previously Presented) The method of claim 53, further comprising storing said list of host identifiers in a memory.

56. (Previously Presented) The method of claim 53, further comprising pairing said list of host identifiers with a host information list.

57. (Previously Presented) The method of claim 53, further comprising discarding the request if said host associated with said host identifier is not in a state of authentication.

58. (Previously Presented) The method of claim 53, further comprising querying an accounting device to obtain account information for said host associated with said host identifier.

59. (Previously Presented) The method of claim 53, wherein said inserting a proxy address in a relay agent address field further comprises flagging an option 82 option in the request.

60. (Previously Presented) A method for handling a DHCP discovery packet, the method comprising:

retrieving a host identifier from the DHCP discovery packet;

matching said host identifier with a list of host identifiers;

maintaining a state of authentication for a host associated with said host identifier if a match is found;

inserting a proxy address in a gateway IP address (GIADDR) field in the DHCP discovery packet;

transmitting the DHCP discovery packet to an address allocation device to issue or renew a host address if said host associated with said host identifier is in a state of authentication;

receiving a DHCP offer packet from said address allocation device;

modifying a value in a server identifier address (SJADDR) field in said DHCP offer packet to match said proxy address; and

transmitting said DHCP offer packet to said host associated with said host identifier.

61. (Previously Presented) The method of claim 60, wherein said host identifier is a MAC address.

62. (Previously Presented) The method of claim 60, further comprising storing said list of host identifiers in a memory.

63. (Previously Presented) The method of claim 60, further comprising pairing said list of host identifiers with a host information list.

64. (Previously Presented) The method of claim 60, further comprising discarding the DHCP discovery packet if said host associated with said host identifier is not in a state of authentication.

65. (Previously Presented) The method of claim 60, further comprising querying an accounting device to obtain account information for said host associated with said host identifier.

66. (Previously Presented) The method of claim 60, wherein said inserting a proxy address in a gateway IP address (GL4DDR) field further comprises flagging an option 82 option in the request.

67 – 94. (Cancelled)

95. (New) Apparatus for handling a request for a network address allocation, comprising:

respective interfaces to a host and an address allocation device;
a central processing unit coupled the interfaces; and

memory coupled to the central processing unit, the memory being operative to store (1) information including a list of host identifiers, and (2) computer programs including a packet parser and a packet composer,

wherein the central processing unit is operative to execute the packet parser and packet composer computer programs to cause the apparatus to perform a method including:

receiving the request from the host;

retrieving a host identifier from the request;

matching said host identifier with the list of host identifiers;

maintaining a state of authentication for the host associated with said host identifier if a match is found;

inserting a proxy address in a relay agent address field in the request;

transmitting said request to an address allocation device to issue or renew a host address if said host associated with said host identifier is in a state of authentication;

receiving a response from said address allocation device;

modifying a value in a server identifier field in said response to match said proxy address; and

transmitting said response to said host associated with said host identifier.

96. (New) The apparatus of claim 95, wherein said host identifier is a MAC address.

97. (New) The apparatus of claim 95, wherein the method performed by the central processing unit further comprises storing said list of host identifiers in a memory.

98. (New) The apparatus of claim 95, wherein the method performed by the central processing unit further comprises pairing said list of host identifiers with a host information list.

99. (New) The apparatus of claim 95, wherein the method performed by the central processing unit further comprises discarding the request if said host associated with said host identifier is not in a state of authentication.

100. (New) The apparatus of claim 95, wherein the method performed by the central processing unit further comprises querying an accounting device to obtain account information for said host associated with said host identifier.

101. (New) The apparatus of claim 95, wherein said inserting a proxy address in a relay agent address field further comprises flagging an option 82 option in the request.

102. (New) A DHCP proxy for handling a DHCP discovery packet, comprising:

respective interfaces to a host and an address allocation device;

a central processing unit coupled to the interfaces; and

memory coupled to the central processing unit, the memory being operative to store (1) information including a list of host identifiers, and (2) computer programs including a packet parser and a packet composer,

wherein the central processing unit is operative to execute the packet parser and packet composer computer programs to cause the apparatus to perform a method including:

retrieve the DHCP packet from the host;

retrieving a host identifier from the DHCP discovery packet;

matching said host identifier with the list of host identifiers;

maintaining a state of authentication for the host associated with said host identifier if a match is found;

inserting a proxy address in a gateway IP address (GIADDR) field in the DHCP discovery packet;

transmitting the DHCP discovery packet to an address allocation device to issue or renew a host address if said host associated with said host identifier is in a state of authentication;

receiving a DHCP offer packet from said address allocation device;

modifying a value in a server identifier address (SJADDR) field in said DHCP offer packet to match said proxy address; and

transmitting said DHCP offer packet to said host associated with said host identifier.

103. (New) The DHCP proxy of claim 102, wherein said host identifier is a MAC address.

104. (New) The DHCP proxy of claim 102, wherein the method performed by the central processing unit further comprises storing said list of host identifiers in a memory.

105. (New) The DHCP proxy of claim 102, wherein the method performed by the central processing unit further comprises pairing said list of host identifiers with a host information list.

106. (New) The DHCP proxy of claim 102, wherein the method performed by the central processing unit further comprises discarding the DHCP discovery packet if said host associated with said host identifier is not in a state of authentication.

107. (New) The DHCP proxy of claim 102, wherein the method performed by the central processing unit further comprises querying an accounting device to obtain account information for said host associated with said host identifier.

108. (New) The DHCP proxy of claim 102, wherein said inserting a proxy address in a gateway IP address (GL4DDR) field further comprises flagging an option 82 option in the request